

CCHCS Care Guide: TB Contact Investigation

SUMMARY

DECISION SUPPORT

PATIENT EDUCATION/SELF MANAGEMENT

GOALS

- ✓ Stop transmission of tuberculosis (TB) by initiating a contact investigation (CI) to identify contacts who were exposed to an infectious TB case.
- ✓ Perform a prompt and thorough evaluation of identified contacts.
- ✓ Complete a CI for all culture or nucleic acid amplification test (NAAT) confirmed TB cases.
- ✓ Identify and treat all identified cases of TB disease and TB infection.

ALERTS

- High priority contact groups (close contacts and immunosuppressed contacts) are at higher risk of progressing to TB disease.
- Rapid screening needed for immunosuppressed contacts.
- Exposed patient contacts with TB symptoms or a newly positive TB test are considered TB suspects and not given TB infection treatment until TB disease is ruled out.

CONTACT INVESTIGATION OVERVIEW

A Contact Investigation is a standardized approach to stop TB transmission by identifying people who have:

- Culture-confirmed pulmonary, laryngeal or pleural TB, or
- High suspicion for pulmonary, laryngeal or pleural TB, with a positive NAAT result on a respiratory sample (culture pending), and started on presumptive treatment for active TB disease.

All suspect and confirmed TB cases must be reported within one business day of identification to the local health department (LHD) and the California Correctional Health Care Services (CCHCS) Public Health Branch (PHB). When infectious culture-confirmed or NAAT positive TB patients are reported, the LHD and CCHCS-PHB will promptly consult with the correctional facility leadership team to support and assist facility staff with initiation and completion of the required CI responsibilities and tasks, including:

- Place appropriate initial medical holds on TB case and exposed contacts.
- Interview the TB case patient as soon as possible.
- Gather lists of patients who possibly have been exposed to the TB index case.
- Establish the correctional facility CI leadership team participants.
- Confer with patient's health care provider, public health nurse (PHN) and other facility leaders, LHD Health Officer (HO) and LHD staff, Office of Employee Health (OEH) and CCHCS-PHB team to determine the following:
 - A. Infectious period,
 - B. Exposed and high priority contact groups, and
 - C. Patient and staff CI plan.
- Refer exposed employees to managers, Return to Work Coordinator and OEH for evaluation, testing and follow-up.
- Perform, summarize, and report baseline and post-window screenings.
- Determine if a CI needs to be expanded based on transmission of TB disease.
- Follow the LHD recommendations for a CI expansion, if indicated.
- Release medical holds on exposed patients as appropriate, and
- Summarize and report final CI results.

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Information contained in the Care Guide is not a substitute for a health care professional's clinical judgment. Evaluation and treatment should be tailored to the individual patient and the clinical circumstances. Furthermore, using this information will not guarantee a specific outcome for each patient.

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CONTACT INVESTIGATION STEPS

1) **Procedure Initial Response:**

When a diagnosis of infectious TB has been confirmed by culture or a NAAT [e.g., polymerase chain Reaction, GeneXpert, Mycobacterium TB Direct (MTD) or pyrosequencing test], respiratory protection and isolation procedures must be implemented. Mandatory reporting must be completed to the:

- LHD HO, and
- CCHCS PHB at cdcrcchcspublichealthbranch@cdcr.ca.gov

For more reporting procedure information, see the following care guides at: <http://lifeline/HealthCareOperations/MedicalServices/Pages/Resources.aspx>, *Care Guides and Tools*, *TB Diagnosis and Isolation Care Guide*, page 2, *Case Reporting-Initial* or *TB Disease Care Guide*, page 11, *Required Reporting of Confirmed and Suspect TB*.

Correctional facility leadership, including custody must be immediately notified. The patient's health care provider must complete an order for respiratory isolation, place appropriate medical holds, and communicate respiratory precautions to custody pursuant to:

Volume: 10 – Public Health and Infection Control; Policy 10.9.1, Procedure 10.9.2: Communicating Precautions from Health Care Staff to Custody Staff. <http://lifeline/PolicyandAdministration/PolicyandRiskManagement/IMSPP/Pages/Resources.aspx>

If the TB case patient has a positive acid-fast bacilli (AFB) smear from a respiratory specimen that is NAAT-positive, place the patient's most recent housing unit on medical hold. The Chief Medical Executive (CME) or designee will write orders for medical holds as needed.

2) **Patient Interview and Case Management:**

The PHN is responsible for providing case management of patients with TB disease and managing TB contact investigations. TB CI forms needed by a PHN for a CI are available at:

<http://lifeline/HealthCareOperations/MedicalServices/PublicHealth/Pages/Resources.aspx>

- [TB Contact Investigation Public Health Nurse Checklist](#)
- [TB Patient Interview Form](#)
- [TB Contact Investigation Line List](#)
- [Transferee Follow-up Request Form](#)
- [TB Contact Investigation Summary Report](#)

The correctional facility PHN is responsible for collecting patient background information and interviewing the TB case patient. The TB case patient interview is key to the CI process and requires pre-interview planning and activities by the PHN to:

- Consult with the patient's health care provider to obtain current clinical information .
- Collect patient background information by reviewing the patient's health record.
- Gather names and initiate line lists of patients to be evaluated in phase 1.

The patient interview must take place in a confidential facility setting within three business days of the TB case identification. If the patient is located in a community hospital, the patient interview must occur within five business days, or within seven business days of case identification if located outside of the local public health jurisdiction.

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CONTACT INVESTIGATION STEPS CONTINUED

PATIENT INTERVIEW OBJECTIVES

- Establish rapport, ensure confidentiality and build trust with the patient.
- Ask the patient open-ended questions.
- Confirm medical and personal information.
- Obtain pertinent information to determine period of infectiousness.
- Identify where the TB case patient spends time.
- Identification of contacts and their priority for evaluation.
- Provide TB case patient education (answer questions and convey importance of adherence).

During the TB case patient interview, the TB Patient Interview Form is completed to obtain the following information:

- Demographics & personal information
- Medical history
- Symptom history
- Housing
- Contacts

Identify and list contacts exposed for each listed activity in the *Contacts Information* section of the TB Patient Interview Form. Document approximate number of hours/week for each activity. If the TB case patient is symptomatic, document each activity for up to three months pre-symptom onset. If the TB case patient is asymptomatic, document each activity for up to one month pre-symptom onset.

The index case or suspect interview should be summarized in writing within five business days after the interview for the purpose of consulting with the LHD and PHB.

3) Development of TB Contact Investigation Line Lists:

From the information gathered during the chart review and patient interview, the PHN will prepare a record of the TB case patient's movement history during the infectious period by location (e.g., housing unit, worksite, classroom, social exposure areas).

Additional information to note:

- 1) The size of room/areas where exposures occurred,
- 2) When exposed, and
- 3) Length of contact exposure times.

4) Decision to Initiate a Contact Investigation:

Patient information gathered by the PHN (during the chart review and patient interview) will be evaluated by the CI team participants to determine the exposed and high priority contact groups. The CI team will discuss and make recommendations for the exposed and high priority contact groups to be placed on medical holds along with recommendations for the initiation of exposed contact clinical assessments (e.g., TB sign/symptom review, chest x-ray (CXR) and TB infection treatment initiation, if indicated). Symptomatic contacts must have immediate referral and clinical evaluation regardless of the type of contact or index case characteristics.

A decision to initiate a contact investigation will be made for patients with the following results:

- Culture or NAAT-confirmed pulmonary, laryngeal, or pleural TB from a respiratory specimen, or
- Positive AFB smear on a respiratory specimen and NAAT-positive or a NAAT was not done, or
- Three negative AFB smears and one NAAT-positive on a respiratory specimen.

CONTACT INVESTIGATION STEPS CONTINUED

5) Contact Investigation Team and Initial Case Conference:

After a decision is made to initiate a CI, a **Contact Investigation Team** must be created in the correctional facility that includes the following:

- TB case patient's health care provider
- CME
- Chief Nursing Executive (CNE)
- Chief Executive Officer (CEO)
- PHN

The **Contact Investigation Team** will also include the:

- LHD HO and other appropriate LHD staff members
- CCHCS PHB clinical team
- OEH

A **Contact Investigation Team** clinical teleconference will be scheduled within two business days after the TB case patient interview. The correctional facility PHN and PHB Statewide PHN will identify the required teleconference participants. The Statewide PHN will be responsible for initiating and opening the call and ensuring meeting minutes are completed. A PHB physician will be responsible for leading the teleconference.

The teleconference participants will review the TB case clinical findings and treatment plan, determine the infectious period window start and end dates, and identify exposed and high priority contact groups (close contacts and immunosuppressed contacts at higher risk of progressing to TB disease). The clinical participants will define the criteria for contacts who are high priority and contacts who must be educated and encouraged to complete TB infection treatment. Follow-up meetings, as determined by the CI team will be scheduled at the end of each teleconference.

CI team teleconference minutes will be completed and distributed by the PHB. Minutes will include information on the patient contact investigation progress along with the OEH employee contact investigation progress. OEH is responsible for follow up on employee exposures, TB sign/symptom evaluations, TB infection treatment, and employee CI summary reports.

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Initiating a Contact Investigation In California State Prisons Adapted from the "Guidelines for Coordination of TB Prevention and Control by Local and State Health Departments and California Correctional Health Care Services 2015"				Timeframes for initial follow-up of persons exposed to tuberculosis	
TB Classification	Index Case Characteristics	Decision to initiate a contact investigation	Minimal recommendation for beginning of the likely period of infectiousness	Business days from listing of a contact to initial encounter	Business days from initial encounter to complete medical evaluation*
TB 3 Culture – confirmed TB from a respiratory specimen (sputum, or bronchial fluid, or identified lung tissue biopsy)	1. Patient with at least one of the following: A. Positive AFB smear on a respiratory specimen, or NAAT positive B. Cavitory CXR or C. TB Symptoms	<u>Always</u> Consult with your local health department	3 months prior to symptom onset or first positive findings (e.g., abnormal chest radiograph) consistent with TB disease, whichever is longer	High priority contact 3-5 days	High priority contact 5 days
	2. Patient with all of the following: A. Negative AFB smears And B. No cavitory lesions on CXR And C. NO TB symptoms	<u>Always</u> Consult with your local health department	4 weeks prior to date of diagnosis as a confirmed case	High priority contact 7 days	High priority contact 10 days

*Comments on prioritizing high priority contacts:

--- Symptomatic contacts need immediate referral and evaluation, regardless of type of contact or index case characteristics.

--- High priority contacts at highest risk for progression from TB infection to disease or increased severity of TB disease should be evaluated as quickly as possible.

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Initiating a Contact Investigation In California State Prisons				Timeframes for initial follow-up of persons exposed to tuberculosis	
Adopted from the “Guidelines for Coordination of TB Prevention and Control by Local and State Health Departments and California Correctional Health Care Services 2015”					
TB Classification	Index Case Characteristics	Decision to initiate a contact investigation	Minimal recommendation for beginning of the likely period of infectiousness	Business days from listing of a contact to initial encounter	Business days from initial encounter to complete medical evaluation*
TB 5 High suspicion (culture pending) from a respiratory specimen, <u>started</u> on presumptive treatment for active TB disease	1. Patient with at least <u>one</u> of the following: A. Positive AFB smear on a respiratory specimen and NAAT positive or NAAT not done. Or B. 3 negative AFB smears and 1 NAAT positive on a respiratory specimen.	<u>Always</u> Consult with your local health department	3 months prior symptom onset or first positive findings (e.g., abnormal chest radiograph) consistent with TB disease, whichever is longer		
	2. Patient with <u>all</u> of the following: A. Three negative AFB smears and B. 1 NAAT negative on a respiratory specimen and C. No cavities on CXR and D. No respiratory signs or symptoms	Consult with local health department to determine if a contact investigation is recommended	4 weeks prior to date of presumptive diagnosis as a TB case	High priority contact 3-5 days	High priority contact 5 days
TB 5 Low suspicion (culture pending) from a respiratory specimen, <u>not started</u> on presumptive treatment for active TB disease	1. Patient must have <u>all</u> of the following: A. 3 negative AFB smears and B. 1 negative NAAT and C. No cavities on CXR and D. Most recent HIV test is negative and was taken in the past 6 months and E. No respiratory signs or symptoms		A contact investigation is not indicated. If respiratory specimens are subsequently culture positive for Mycobacterium TB, follow guidelines for TB3.		
TB 3 or 5 Extra pulmonary	No pulmonary or laryngeal or pleural involvement	Not indicated	Not Applicable		

CONTACT INVESTIGATION STEPS CONTINUED

Guidelines for the Investigation of Contacts Exposed to a Person with Infectious TB:

The index case characteristics: AFB smear, NAAT and CXR results along with the patient's TB signs and symptoms will be used to determine if a contact investigation is indicated. These data will be used to determine the beginning of the infectious period. The three most common scenarios are:

- CI indicated: Infectious period to begin three months prior to symptom onset or first positive findings consistent with TB disease, whichever is longer, or
- CI indicated: Infectious period to begin four weeks prior to date of diagnosis as a confirmed case or presumptive diagnosis as a TB case, or
- CI not indicated

The window period (time required for the TB organism to become detectable after a person is exposed to a person with infectious TB disease) is determined during the CI team teleconference. The window period typically ends 8-10 weeks after the last exposure to the TB case.

6) Contact Investigation Phase I:

Using the criteria and direction recommended by the CI team, the PHN will develop the high priority immunosuppressed contact and close contact line lists. The PHN will also prepare a TB Contact Investigation Line List for other exposed (but not determined to be high risk during the first phase of the CI) contacts. The contacts who were not initially considered to be at high risk or significantly exposed as determined in the CI team teleconference will only be screened if the CI expands.

Within 24 hours after the teleconference, all high priority immunosuppressed contacts should be identified and recorded by location on a TB Contact Investigation Line List. Within two business days after the teleconference, the PHN should complete a TB Contact Investigation Line List that includes all other high priority contacts (close contacts/inner circle) by location in the originating correctional facility.

The PHN is responsible for requesting printouts of all contacts who were housed in cells or housing units with the TB case patient during the likely infectious period, including those who transferred, paroled or released. The printouts can be requested from the Classification and Parole Representative (C&PR).

The high priority immunosuppressed contacts and other high priority contacts must have a prompt TB sign/symptom screen and CXR (completed/read) along with a tuberculin skin test (TST) placed, if indicated.

If there is evidence of TB disease, the patient contact must be referred immediately to a health care provider for a clinical evaluation. If there is evidence of TB infection (no TB sign/symptoms, normal CXR result and ≥ 5 mm TST result), the patient contact must be referred to a health care provider for a clinical evaluation to rule out TB disease. Exposed patient contacts with TB symptoms or a newly positive TB test must be considered to be TB disease suspects and must not be given TB infection treatment until TB disease is ruled out by a provider and three documented smear and culture results, if done. After TB disease is ruled out and the patient contact is diagnosed with latent TB infection (LTBI), a provider order should be obtained for TB infection medication. TB infection treatment for patient contacts should be highly encouraged and promptly initiated (Attachments A and B, pages 12-13).

High Priority Immunosuppressed Contacts:

- HIV-infected
- Had organ transplant and is on transplant immunosuppression
- Otherwise immunosuppressed (e.g., receiving TNF-alpha antagonists or the equivalent of ≥ 15 mg/day of prednisone for \geq one month)
- Chemotherapy for cancer or TNF-alpha antagonists

CONTACT INVESTIGATION STEPS CONTINUED

All exposed high priority contacts should have a recent HIV test (in past 6 months). HIV tests should be offered using the opt-out screening method.

Baseline TB screening must be performed and recorded for all high priority immunosuppressed contacts and other close/significantly exposed contacts. All contact screenings must be recorded on the TB Contact Investigation Line List and in the EHR TB Testing Evaluation Report (TB Evaluation and Testing Section).

Contact TB screenings include the following:

- Complete a TB sign/symptom screening
- TST or blood test (IGRA) on all patients who previously tested negative
- HIV test, if not done in past 6 months
- CXR, for immunosuppressed and newly infected contacts
- Clinical assessment by health care provider

Any contact with TB symptoms must be promptly assessed for TB disease by a health care provider. Within 24 hours, contacts with TST indurations ≥ 5 mm are considered newly infected and must get a TB sign/symptom screen, CXR, and evaluation by a health care provider to rule out TB disease. Contacts with a documented previous positive TST result must be evaluated for signs and symptoms of TB disease. If TB disease is ruled out, the contact must be assessed for immunocompromising conditions and whether or not they have previously completed TB infection treatment in order to determine further clinical evaluation and treatment (See attachment C, page 14). Contacts with TST indurations ≤ 5 mm and no TB symptoms are considered to be uninfected and must be screened (with a TB sign/symptom screen; TST) in the window period (8-10 weeks after last exposure to the TB case).

Using the Tuberculosis Contact Investigation Summary Report the PHN will summarize and record the baseline CI findings. The PHN will calculate the baseline infection rate (number of new infections/number of contacts tested) and provide a report of results to the CI team members in the facility, LHD, and PHB. The CI team will determine if the CI should be expanded based on documented transmission of disease.

7) Contact Investigation Phase II:

Window-period screening (8-10 weeks after last exposure to the TB case) must be performed and recorded for all previously uninfected contacts who had TST indurations ≤ 5 mm results and no TB symptoms during the first screening. This group of contacts should have the following:

- TB sign/symptom screen
- TST

Window-period screenings must be recorded on the TB Investigation Line List and in the EHR TB Testing Evaluation Report (TB Evaluation and Testing section). When window-period screenings are complete, the PHN will calculate the new infection rate (number of new infections/number of contacts tested) and provide a report of results to the CI team members in the facility, LHD, and PHB. The CI team will determine whether or not disease transmission has occurred and if the CI should be expanded. The LHD HO and CME may terminate the CI when there is no further evidence of ongoing disease transmission.

8) Paroled, Released or Discharged Patient Contacts:

Within two business days, the Transferee Follow-Up Request Form should be completed for all identified high priority contacts who are no longer housed in the originating correctional facility. The PHN will create separate lists for the following:

- 1) Patient contacts transferred within CDCR facilities and identified to be high priority:
 - a) The PHN will email (*with 'High Importance!'*) the list of high priority transferees to the following:
 - PHN or designee where the contact is currently housed
 - PHB at: cdrcchcspublichealthbranch@cdcr.ca.gov
 - b) The PHN will request that transferee screening results be sent (*with 'High Importance!'*) within 10 business days to the originating correctional facility PHN and the PHB. If the originating facility PHN does not receive the transferee screening results within 10 business days, their designated Statewide PHN can be contacted to assist in obtaining the information.

CONTACT INVESTIGATION STEPS CONTINUED

- 2) Patient contacts who were paroled, released or discharged to the community and are now identified to be high priority:
- a) The PHN will email the parolee/released/discharge list (*including [encrypt] in the subject line*) to the originating correctional facility's LHD.
 - b) The LHD will send the community contact investigation results to the requesting PHN. The results must be included in the final CI summary. If the community contact screening information is not received from the LHD within 10 business days, the originating correctional facility PHN will follow-up with the LHD to request the results. If within 10 business days, the LHD cannot provide information on community contacts, the LHD will determine and notify the facility PHN if more time is needed to locate community contacts or if the community contacts are lost to follow up.

Both the results of the transferee and community contacts must be included with the final CI summary.

9) **Final Reporting and Contact Investigation Team Teleconference:**

In consultation with the Statewide PHN, the facility PHN will complete and provide the TB Contact Investigation Summary Report to the CI team members in the facility, LHD, and PHB.

During the final CI team teleconference, the completed patient CI findings will be presented. The employee CI findings will be presented by the OEH clinical team. Based on the rate and number of patient and employee baseline and/or new infections, the CI team will determine if the CI should be expanded or terminated. The LHD HO and CME may terminate the CI when there is no further evidence of ongoing disease transmission.

Note: When there is documented transmission of TB, the CI may quickly expand to add more contacts to the high priority group.

Complete and Report Final Summaries of Screening and TB Treatment Results:

Within 10 business days of the close of the TB CI, and again 30 business days after completion of LTBI treatment for the new positives, the final TB Contact Investigation Summary Report must be completed and sent to the CME for review and signature. After signed approval, the report can be released to the correctional facility Warden, CEO, CME, CNE, the LHD, and PHB.

The final TB Contact Investigation Summary Report includes significant information that provides a complete picture of the CI (e.g., information about contact TB screens/tests, number of new positives, number of contacts who completed TB infection treatment, total number of contacts screened).

The final TB Contact Investigation Summary Report must include the following attachments

- TB CI Report – Index Case Information
- TB CI Report – Patient High Priority Contacts Investigated - Phase I and Phase II
- CI Definitions

10) **Employee TB Contact Investigation:**

Within 72 hours after the TB case is reported to the LHD and PHB, a PHB designee must notify and provide exposure information to OEH staff (without providing the index case name). OEH is responsible for notifying the correctional facility leadership team (Warden, CEO) about the exposure. The facility leadership team is responsible for assigning a manager (e.g., Captain or Supervising Registered Nurse to work with OEH and the employee health contractor to identify, interview, and screen employees.) The facility manager will be responsible to ensure the CI duties are completed (e.g., maintain records, document in patient health records, and work with OEH to document and report the CI employee findings).

DEFINITIONS

Close Contact: A person who had prolonged, frequent, or intense contact with a person with TB while he/she was infectious. Close contacts are more likely to become infected with *M. tuberculosis* than contacts who see the patient less often.

Contacts: Individuals sharing air space with a patient identified with infectious TB disease during their likely period of infectiousness.

Concentric Circle: A method of screening and testing contacts in order of intensity of exposure (close vs. other-than-close) and risk of becoming infectious (high priority vs. low priority). Close contacts and high priority contacts at high risk of developing TB disease are screened and tested first.

Contact Investigation: A procedure for identifying people exposed to someone with infectious TB, evaluating them for LTBI and TB disease, and providing appropriate treatment for TB infection and TB disease.

Exposure: The significance of an exposure depends on the infectiousness of the TB patient and strain, duration, characteristics of the location of contact with a patient with TB disease, and immunosuppression of the contact.

Exposure Period: Range of time in which a contact was exposed to a patient with TB disease during the infectious period.

High Priority Contacts: Contacts with either:

- a) Close and/or high intensity exposure (as defined by the CI team based on length, ventilation, coughing, and location of contact), or
- b) Immunosuppression. The following medical conditions can cause the contact to be at particularly high risk of developing TB disease if they become infected with *M. tuberculosis*:
 - HIV-infected
 - Had organ transplant and is on transplant immunosuppression
 - Otherwise immunosuppressed (e.g., receiving TNF-alpha antagonists or the equivalent of ≥ 15 mg/day of prednisone for \geq one month)
 - Chemotherapy for cancer or TNF-alpha antagonists

TB Case Patient: A person with suspected or confirmed TB disease who is the initial case reported to the health department. The index case may or may not be the source case (see source case).

Infectious Period: Typically starts 12 weeks before the patient was diagnosed with TB or before symptom onset (one month if asymptomatic) and extends until the infectious individual has been removed from the general population and isolated. The infectious period is variable and depends on the clinical characteristics of the TB patient.

Line List: A spreadsheet tool designed to assist contact investigators in keeping a list of those who may have been exposed to an infectious case of TB (Not a replacement for other required medical or nursing documentation).

New TB Infection: In a CI, defined as a new tuberculin/TB skin test (TST) reading ≥ 5 mm or a newly positive TB blood test (IGRA) and with no TB sign/symptoms and negative CXR. If the baseline TST is > 0 mm and < 10 mm, then an increase of 5 mm is a new infection.

Open-Ended Questions: Questions that cannot be answered with a simple “yes” or “no.” They are designed to elicit the patient’s knowledge, feelings, and beliefs by beginning with words such as “What,” “Why,” “Who,” “How,” and “When,” that demand an explanation. They are used to explore complex issues that do not have a finite or predetermined set of responses.

DEFINITIONS CONTINUED

Other-Than-Close Contacts: Contacts with less intense, less frequent, or shorter duration of contact to the TB patient than close contacts.

Significant Exposure: An exposure to a TB case in which the circumstances of the exposure make TB transmission sufficiently likely that the contact requires inclusion in a line list and further evaluation by a health care provider.

Source Patient/Case: Person with infectious TB disease who is responsible for transmitting *M. tuberculosis* to another person or persons. He/she is identified through either a contact or source case investigation and may or may not be the TB case patient (see TB case patient).

TB Infection (Latent TB Infection): Persons with LTBI carry the organism that causes TB but do not have TB disease, are asymptomatic, and are noninfectious. Persons with TB infection usually have a positive reaction to the tuberculin skin test.

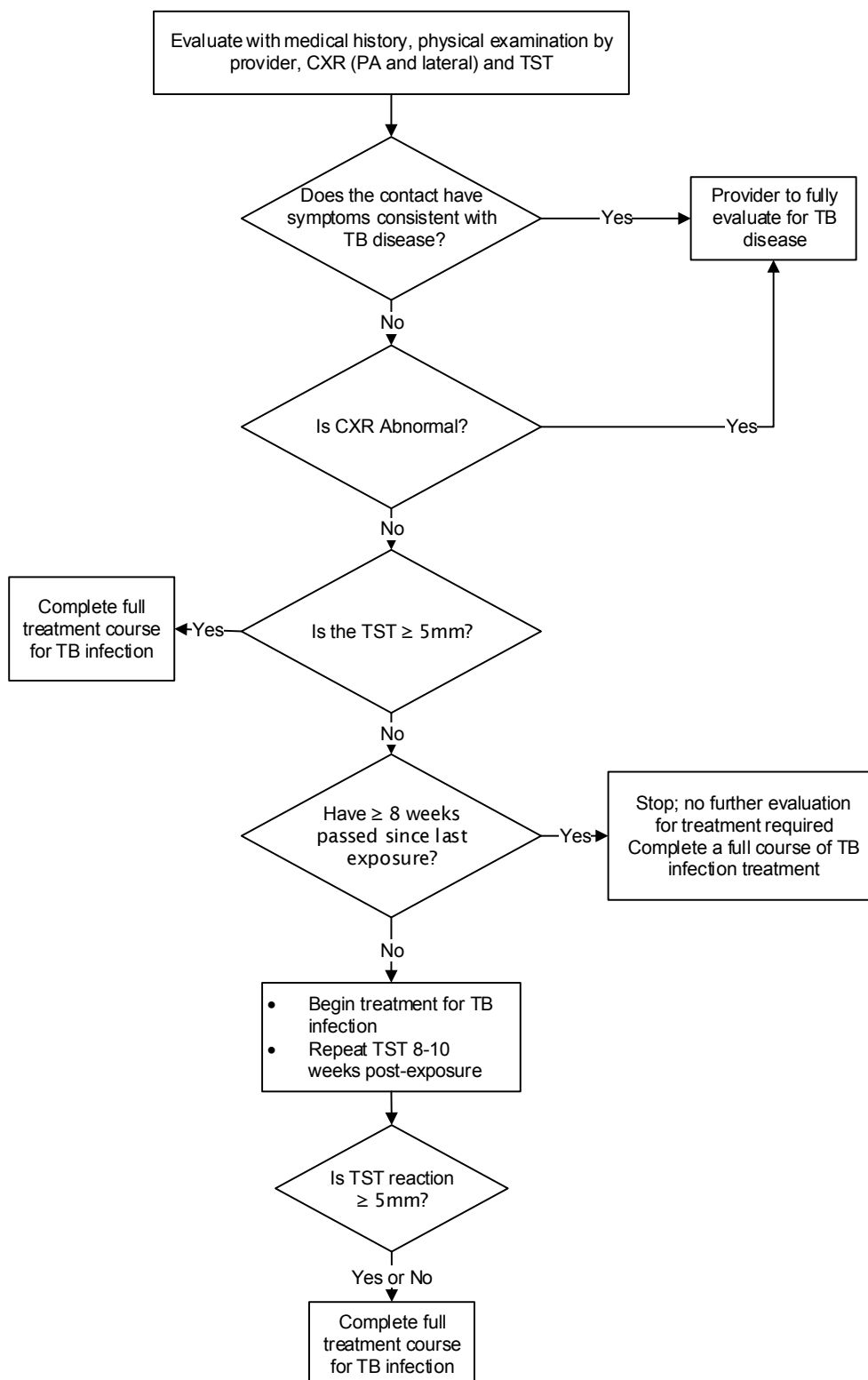
Tuberculin Skin Test Conversion (TST): Defined differently from a standard skin test conversion; for contacts, a skin test conversion is defined as a change from < 5 mm on the initial skin test to a reaction of \geq 5 mm on the second test, 10 to 12 weeks after exposure.

Window Period: Time span between the date of an initial TB skin test with a negative reaction and the date of the follow-up TB skin test that should take place 10 – 12 weeks after exposure. After the window period has ended, a repeat skin test should be administered to each contact who had an initial negative reaction.

Window Period Prophylaxis: The practice of providing treatment for LTBI to high-risk contacts (including HIV infected and other immunosuppressed persons) with an initial negative skin test reaction less than 10 to 12 weeks after their exposure. If the contact has a negative skin test reaction after the window period, treatment for TB infection is usually stopped.

EVALUATION, TREATMENT, AND FOLLOW-UP OF IMMUNOCOMPROMISED TB CONTACTS

Attachment A



Adapted from: CDPH/CTCA Joint Addenda. California Department of Public Health and California Tuberculosis Controllers Association. Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis. Addendum 29. Page 40. Accessed 8/2/16 at: http://www.ctca.org/filelibrary/file_363.pdf

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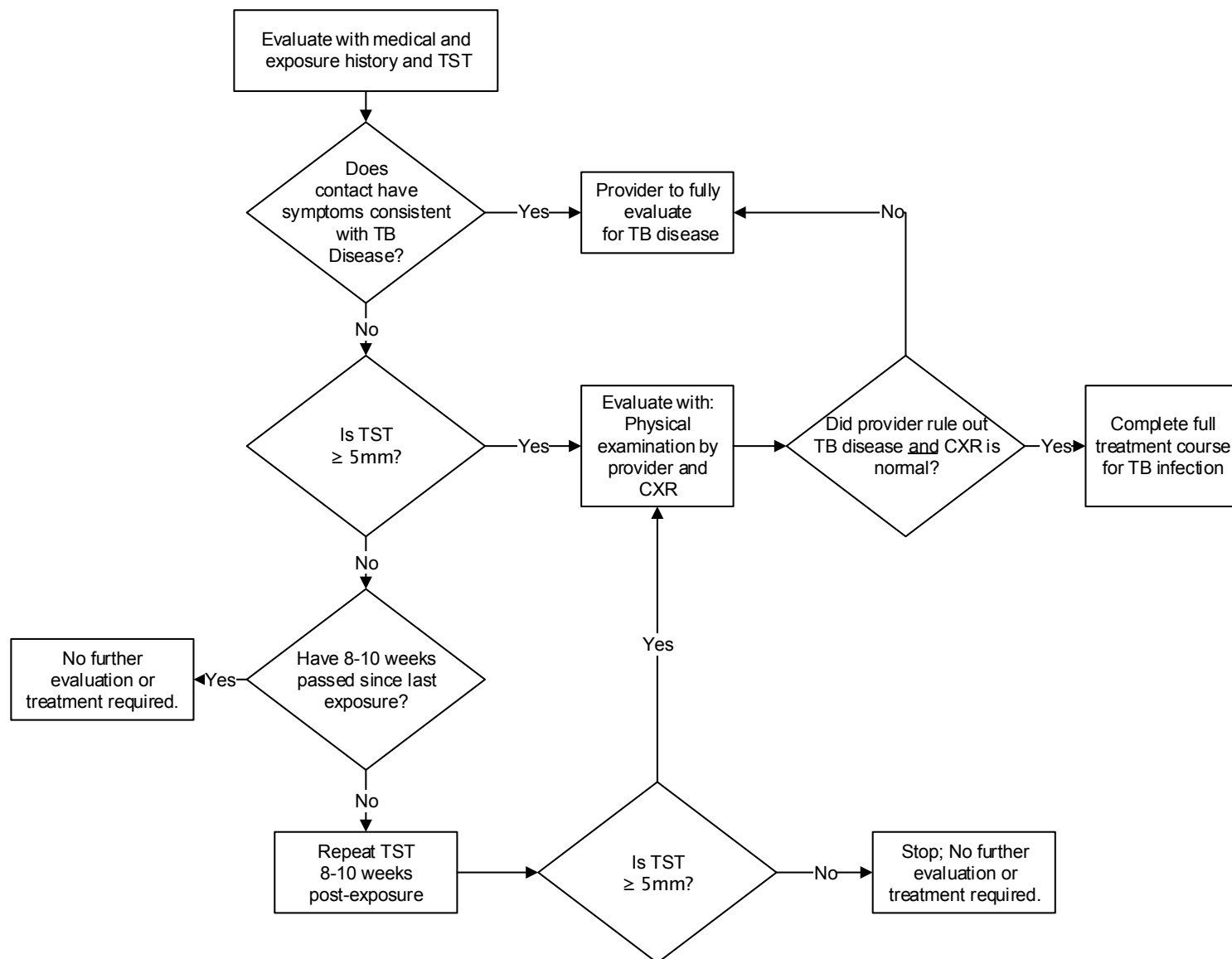
SUMMARY

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EVALUATION, TREATMENT, AND FOLLOW-UP OF IMMUNOCOMPETENT TB CONTACTS

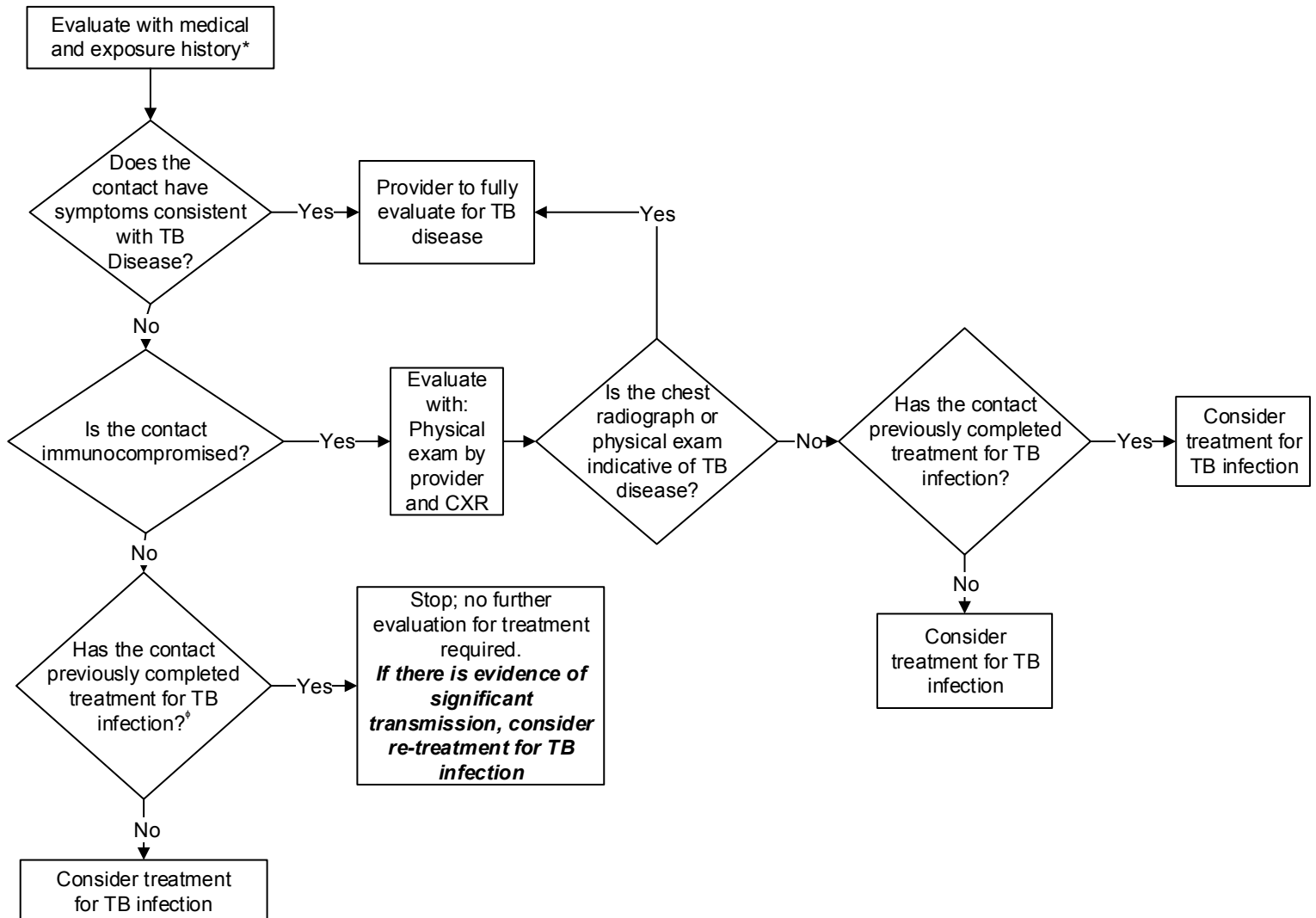
Attachment B



Adapted from: CDPH/CTCA Joint Addenda. California Department of Public Health and California Tuberculosis Controllers Association. Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis. Addendum 30. Page 42. Accessed 8/2/16 at: http://www.ctca.org/filelibrary/file_363.pdf

EVALUATION, TREATMENT, AND FOLLOW-UP OF TB CONTACTS WITH A DOCUMENTED PREVIOUSLY POSITIVE TB SKIN TEST

Attachment C



***An initial chest x-ray for asymptomatic contacts may be considered in certain circumstances to identify a possible source case.**
Before initiation of treatment contacts should be evaluated fully for TB disease

Adapted from: CDPH/CTCA Joint Addenda. California Department of Public Health and California Tuberculosis Controllers Association. Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis. Addendum 32. Page 44. Accessed 8/2/16 at: http://www.ctca.org/filelibrary/file_363.pdf

TB CONTACT INVESTIGATIONS: WHAT YOU SHOULD KNOW**How is TB spread?**

TB is spread through the air from one person to another. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings. People nearby may breathe in these bacteria and become infected.

When a person breathes in TB bacteria, the bacteria can settle in the lungs and begin to grow. From there, they can move through the blood to other parts of the body such as the kidney, spine, and brain.

TB disease in the lungs or throat can be infectious. This means that the bacteria can be spread to other people. TB in other parts of the body, such as the kidney or spine, is usually not infectious.

People with TB disease are most likely to spread it to people they spend time with every day.

What is a TB contact investigation?

- When someone has active TB disease, it is very important to find out if the disease has spread to other people. When health care workers look to see if the disease has spread, it is called a contact investigation.
- A person with TB disease can spread the infection without even knowing it.
- If TB has spread to other people, they will need medicine so they don't get sick.
- Tuberculosis disease and latent TB infection can be cured with proper medical treatment.
- Information that you give to a health care worker during a TB contact investigation is confidential.

What happens in a TB contact investigation?

- Health care workers will determine who may have been exposed to TB germs.
- People exposed will need to be tested for TB.

A TB skin or blood test will tell you if you have ever had TB germs in your body.

- For a TB skin test, a harmless fluid is placed under your skin on the inside of your arm. A very small needle is used, so you will only feel a light pinch.
- Make sure you don't put a bandage or lotion on the test spot. Also, don't scratch the spot. If the area itches, put a cold cloth on it. It is okay for the test spot to get wet, but do not wipe or scrub the area.
- In 2 to 3 days your health care provider will look at the test spot on your arm. He or she will look at the test spot and measure any bump that appears there. Your health care provider will let you know if your test is negative or positive.

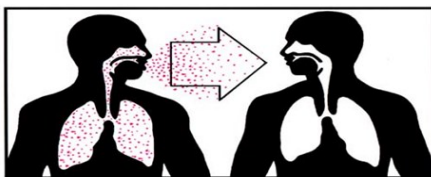
SUMMARY

DECISION SUPPORT

PATIENT EDUCATION/SELF MANAGEMENT

TB SKIN TEST (MANTOUX): WHAT YOU SHOULD KNOW**What is the TB Skin Test?**

The tuberculosis (TB) skin test, sometimes called a “Mantoux,” is a simple, harmless way to find out if you have latent TB infection.

What is latent TB infection?

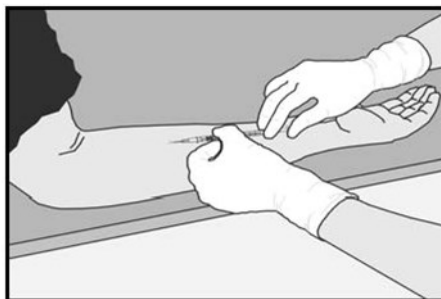
There are two phases of TB. Both phases can be treated with medicine. When TB germs first enter your body, they cause latent (silent) TB infection. You will have no symptoms with latent infection. Without treatment, latent TB infection can become active TB disease. Anyone can get TB because it spreads from one person to another through the air.

Phase 1 – Latent TB Infection	Phase 2 – Active TB Disease
TB germs are “asleep” in your body. This phase can last for a long time (even many years.)	TB germs are active and spreading. They are damaging tissue in your body. TB disease usually affects the lungs but it may affect other organs.
You don’t look or feel sick. Your chest x-ray is usually normal.	You usually feel sick. Your doctor will do special tests to find where TB is harming your body.
You can’t spread TB to other people.	If the TB germs are in your lungs, you can spread TB to other people by coughing, sneezing, talking, or singing.
Usually treated by taking 1 or 2 medicines for 3 to 9 months.	Treated with 4 medicines for at least 2 months, then usually 2 medicines for at least another 4 months.

How can I tell if I have latent TB infection?

A TB skin test (“Mantoux”) can show if you have latent TB infection. You could have latent TB infection if you have ever spent time close to someone with active TB disease (even if you didn’t know they were sick).

Your nurse will use a small needle to inject some harmless testing fluid (called “tuberculin”) under the skin on your arm.



Your nurse MUST check your arm 2 or 3 days after the TB skin test, even if your arm looks OK to you.

If you have a reaction to the test, it will look like a raised bump. Your nurse will measure the size of the reaction. If there is a bump, it will go away in a few weeks.

CCHCS Care Guide: TB Contact Investigation

SUMMARY

DECISION SUPPORT

PATIENT EDUCATION/SELF MANAGEMENT

TB SKIN TEST (MANTOUX): WHAT YOU SHOULD KNOW (CONT.)

What if I've had BCG vaccine?

- Even if you have had BCG vaccine, you can have a TB skin test.
- People who have had BCG vaccine still can get latent TB infection and active TB disease.
- BCG vaccine may help protect young children from getting very sick with TB. This protection goes away as people get older.
- BCG vaccine may sometimes cause a positive TB skin test reaction. However, if you have a positive reaction to the TB skin test, it probably is from TB germs in your body - not from BCG vaccine.

How do I take care of my arm after the TB skin test?

- Don't cover the spot with a bandage or tape.
- Be careful not to rub it or scratch it.
- If the spot itches, put a cold cloth on it.
- You can wash your arm and dry it gently.

When your TB skin test is negative:

- On the third day after the injection, you have little or no hardening at the site of the injection.
- You don't have TB germs in your body, OR
- TB germs are not showing up in your body at this time. Sometimes the test may have been done too soon to show the TB germs.

If your TB skin test is negative, you still may need to have more tests if you have:

- Been around someone with TB disease. You may need a repeat TB skin test within about 8 weeks of your exposure if this is true.
- Signs of TB disease, like coughing, chest pain, fever, weight loss, or tiredness.
- Certain medicines or HIV infection, since the TB skin test may not react the way it should. You may need to get an x-ray of your chest or give a phlegm sample. These extra tests will help show if you have TB disease or TB infection

When your TB skin test is positive:

- On the third day after the injection, you have a hardening of a certain size at the injection site.
- You have TB germs in your body.
- You may need to get an x-ray of your chest or give a sputum sample. These extra tests will help show if you have TB disease or TB infection.
- Your doctor or health care provider may ask if you have HIV. TB infection and HIV together can make you very sick very quickly. If you don't know if you have HIV, your doctor or health care provider may suggest you take an HIV test

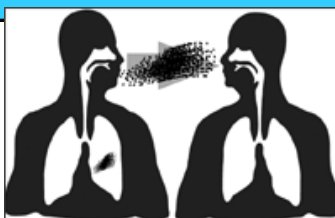
RESUMEN

APOYO PARA TOMAR DECISIONES

EDUCACIÓN PARA EL PACIENTE/CONTROL PERSONAL DEL CASO

INVESTIGACIÓN DE CONTACTO DE LA TB: LO QUE DEBE SABER

¿Cómo se propaga la TB?



La TB se transmite de una persona a otra a través del aire. Las bacterias entran al aire cuando una persona que tiene TB activa, en los pulmones o la garganta, tose, estornuda, habla o canta. Las personas cercanas pueden respirar estas bacterias e infectarse.

Cuando una persona inhala bacterias de la TB, dichas bacterias pueden instalarse en los pulmones y empezar a crecer. A partir de ahí, pueden moverse a través de la sangre a otras partes del cuerpo, tales como el riñón, la columna vertebral y el cerebro.

La enfermedad de la TB en los pulmones o la garganta puede ser infecciosa. Esto significa que las bacterias se pueden propagar a otras personas. La TB en otras partes del cuerpo, tales como en el riñón o en la columna vertebral, por lo general, no es infecciosa.

Las personas con la enfermedad de la TB tienen una mayor probabilidad de contagiar a las personas con quienes pasan tiempo todos los días.

¿Qué es una investigación de contacto de la TB?

- Cuando una persona tiene la enfermedad activa de tuberculosis (TB), es muy importante averiguar si la enfermedad ha sido propagado a otras personas. Cuando los profesionales de la salud investigan para saber si la enfermedad se ha propagado, se le denomina investigación de contacto.
- Una persona con TB puede propagar la infección sin siquiera saberlo.
- Si la TB ha sido propagado a otras personas, necesitarán medicamentos para que no se enfermen.
- La enfermedad de la tuberculosis y la infección de la TB latente pueden curarse con un tratamiento médico adecuado.
- Cualquier información que usted menciona a un profesional de la salud durante una investigación de contacto de la TB es confidencial.

¿Qué ocurre en una investigación de contacto de la TB?

- Los profesionales de la salud determinarán quién puede haber estado expuesto a los gérmenes de la TB.
- Las personas expuestas tendrán que someterse a la prueba de la TB.

Una prueba de TB, cutánea o en la sangre, le indicará si alguna vez ha tenido gérmenes de la TB en su cuerpo.

- Para realizar una prueba cutánea de TB, se coloca un fluido inocuo debajo de la piel, en la parte interna del brazo. Se utiliza una aguja muy pequeña, así que sólo sentirá un ligero pellizco.
- Asegúrese de no colocarse ni vendajes ni lociones en el lugar donde se realizó la prueba, ni tampoco rascarse esta área. Si le da comezón, ponga un paño frío en el sitio. El lugar donde se realizó la prueba se puede mojar, pero no limpie ni frote el área.
- En 2 a 3 días su proveedor de cuidados de la salud observará el lugar donde se realizó la prueba en su brazo y medirá cualquier abultamiento que aparezca allí. Su profesional de la salud le comunicará si la prueba es negativa o positiva.

RESUMEN

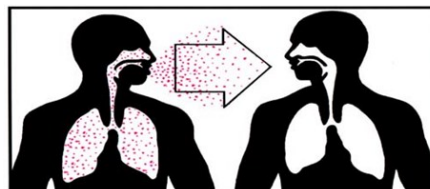
APOYO PARA TOMAR DECISIONES

EDUCACIÓN PARA EL PACIENTE/CONTROL PERSONAL DEL CASO

PRUEBA CUTÁNEA PARA DETECTAR LA TUBERCULOSIS (MANTOUX): LO QUE DEBE SABER

P: ¿Qué es la prueba cutánea para detectar la tuberculosis?

R: La prueba cutánea para detectar la tuberculosis (TB), a veces denominada “Mantoux,” es una manera sencilla e inocua de averiguar si tiene una infección latente de TB.

P: ¿Qué es una infección latente de TB?

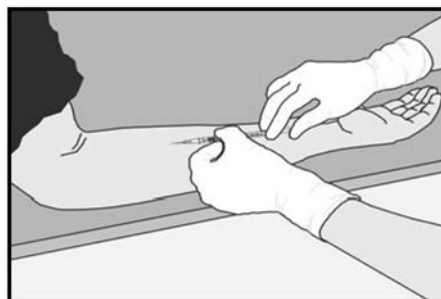
R: La TB tiene dos fases. Ambas fases se pueden tratar con medicina. Cuando los gérmenes de la TB entran por primera vez a su cuerpo, causan la infección latente de TB (silenciosa). Este tipo de infección no produce síntomas. Sin tratamiento, la infección latente de TB puede convertirse en la enfermedad activa de TB. Cualquier persona puede contraer la TB, porque se propaga de una persona a otra a través del aire.

Fase 1 – Infección latente de TB	Fase 2 – Enfermedad activa de TB
Los gérmenes de la TB están “dormidos” en su cuerpo. Esta fase puede durar mucho tiempo (incluso muchos años.)	Los gérmenes de la TB están activos y propagándose. Están dañando los tejidos en su cuerpo. La enfermedad de TB generalmente afecta los pulmones pero puede afectar otros órganos.
No se ve ni se siente enfermo. Una radiografía del pecho es generalmente normal.	Generalmente se siente enfermo. Su médico le hará exámenes especiales para encontrar dónde la TB está dañando su cuerpo.
No puede propagar la TB a otras personas.	Si los gérmenes de la TB están en sus pulmones, puede propagar la TB a otras personas al toser, estornudar, hablar o cantar.
Normalmente, el tratamiento consiste en tomar 1 o 2 medicinas durante 3 o 9 meses.	Se trata con 4 medicinas durante por lo menos 2 meses, luego 2 medicinas durante por lo menos 4 meses más.

P: ¿Cómo puedo saber si tengo la infección latente de TB?

R: Una prueba cutánea de TB (“Mantoux”) puede mostrar si tiene la infección latente de TB. Podría tener la infección latente de TB si alguna vez ha pasado un tiempo cerca de alguien con la enfermedad activa de TB (incluso si no sabía que la persona estaba enferma).

Su enfermera utilizará una aguja pequeña para inyectar un líquido de prueba inocuo (llamado “tuberculina”) bajo la piel de su brazo.



La enfermera **DEBE** revisar su brazo 2 o 3 días después de la prueba cutánea de TB, aun si a usted le parece bien el brazo.

Si tiene una reacción a la prueba, se verá como un abultamiento. La enfermera medirá el tamaño de la reacción. Si hay un abultamiento, desaparecerá dentro de unas semanas.

RESUMEN	APOYO PARA TOMAR DECISIONES	EDUCACIÓN PARA EL PACIENTE/CONTROL PERSONAL DEL CASO
PRUEBA CUTÁNEA PARA DETECTAR LA TB (MANTOUX): LO QUE DEBE SABER (CONT.)		
<p>P: ¿Y si ya me he aplicado la vacuna BCG?</p> <ul style="list-style-type: none"> Aunque haya recibido la vacuna BCG, se le puede realizar la prueba cutánea de TB. Las personas que han recibido la vacuna BCG todavía pueden contraer la infección latente de TB y la enfermedad activa de TB. La vacuna BCG puede ayudar a proteger a los niños de enfermarse gravemente con TB. Esta protección desaparece a medida que las personas envejecen. La vacuna BCG a veces puede causar una reacción positiva de la prueba cutánea de TB. Sin embargo, si tiene una reacción positiva a la prueba, probablemente es debido a los gérmenes de TB que tiene en el cuerpo, y no a la vacuna BCG. 		
<p>P: ¿Cómo debo cuidar mi brazo después de la prueba cutánea de TB?</p> <ul style="list-style-type: none"> No cubra el sitio de la inyección con un vendaje o adhesivo. Tenga cuidado de no frotarlo ni rasarlo. Si le da comezón, ponga un paño frío en el sitio. Puede lavarse el brazo y secarlo suavemente. 		
<p>Cuando su prueba cutánea de TB es negativa:</p> <ul style="list-style-type: none"> No tiene endurecimiento o tiene muy poco endurecimiento en el sitio de la inyección tres días después de la inyección. Usted no tiene gérmenes de TB en su cuerpo, o Los gérmenes de la TB no pueden ser detectados en su cuerpo en este momento. A veces, es posible que la prueba se haya realizado demasiado pronto para descubrir los gérmenes de la TB. <p>Si su prueba cutánea de TB es negativa, es posible que aún necesite someterse a pruebas adicionales si:</p> <ul style="list-style-type: none"> Ha estado cerca de alguien que tiene la enfermedad de la TB. En ese caso es posible que necesite una prueba cutánea de TB aproximadamente 8 semanas después de haber sido expuesto a la tuberculosis. Tiene los síntomas de la enfermedad de la TB, como la tos, el dolor de pecho, la fiebre, la pérdida de peso o el cansancio. Está tomando ciertos medicamentos o si tiene la infección de VIH, debido que la prueba cutánea de TB puede no reaccionar de la manera en que debería. 		
<p>Cuando su prueba cutánea de TB es positiva:</p> <ul style="list-style-type: none"> Tiene endurecimiento de un cierto tamaño en el sitio de la inyección tres días después de la inyección Usted tiene gérmenes de la TB en su cuerpo. Es posible que necesite que le realicen una radiografía del pecho o que Ud. de una muestra de flema. Estas pruebas adicionales permitirán determinar si usted tiene la enfermedad de la TB o la infección de la TB. Es posible que su médico o profesional de la salud le pregunte si está tomando ciertos medicamentos o si tiene el VIH. Si tiene la infección de la TB junto con el VIH, esto puede hacer que se enferme muy rápidamente. Si usted no sabe si tiene el VIH, su médico o su profesional de la salud puede sugerirle que se someta a una prueba para el VIH. 		